

R E M A R K S

Claims 2, 4, 6, and 10 to 12 have been allowed. Applicants have revised Claim 11 to remove a typographical error which occurred in the previous amendment. The expression "A is in the range from 100  $m^2/m^3$  to 500  $m^2/m^3$ " was inadvertently changed to --A is in the range from 100  $m^2/m^3$  to 400  $m^2/m^3$ -- when the claims were transcribed<sup>1)</sup>. The correction of Claim 11 removes new matter inadvertently added, and otherwise does not alter the subject matter of the claims. Since the claimed subject matter has not been altered no additional examination on the merits is required. Also, since the inadvertent error occurred only in the most recent amendment, applicants could not have corrected the error earlier.

It is respectfully requested that the Primary Examiner recommend, and the Commissioner approve, entering of the amendment without withdrawal of the application from issue.

Please charge any shortage in fees due in connection with the filing of this paper, including Extension of Time fees, to Deposit Account No. 11.0345. Please credit any excess fees to such deposit account.

Respectfully submitted,

KEIL & WEINKAUF



Herbert B. Keil

Reg. No. 18,967

1350 Connecticut Ave, N.W.  
Washington, D.C. 20036  
(202) 659-0100

Encl.: THE LISTING OF CLAIMS (Appendix I)  
THE AMENDED CLAIMS (Appendix II)

HBK/BAS

---

1) The Examiner will note that the value of 400  $m^2/m^3$  is not supported by applicants' disclosure, whereas the value of 500  $m^2/m^3$  is, for example, supported by Claim 4.

## A P P E N D I X I:

THE LISTING OF CLAIMS (version with markings):

1. (canceled)
2. (previously presented) A process for purification of ethylene oxide by distillation, comprising the step in which
  - an aqueous mixture comprising ethylene oxide, formaldehyde and at least 5% by weight of water is introduced via a feed into a distillation apparatus comprising at least one packed column which contains a structured or bulk packing and has a specific mass transfer area  $A$ , the mixture being introduced at a height above the bottom of at least  $x^{\min}$ , in m, which, for a given specific mass transfer area  $A$ , in  $\text{m}^2/\text{m}^3$ , is given by the equation
$$x^{\min} = 5.5 m - A \cdot 0.006 \text{ m}^2,$$
  - pure ethylene oxide containing 4 ppm or less formaldehyde, is taken off at the top and
  - in the bottom phase a mixture is obtained which contains less than 5% by weight of ethylene oxide;an acetaldehyde enriched fraction is removed as a side stream from the column at a side take-off located between the top and bottom of the column,  
and wherein the aqueous mixture is introduced via the feed at a height of from  $1.5x^{\min}$  to  $7x^{\min}$ .
3. (canceled)
4. (previously presented) A process as claimed in claim 2, wherein the specific mass transfer area  $A$  is in the range from  $100 \text{ m}^2/\text{m}^3$  to  $500 \text{ m}^2/\text{m}^3$ .
5. (canceled)
6. (previously presented) A process as claimed in claim 2, which further comprises a step in which further mixture, comprising water, is additionally introduced via a feed line at a height of at least one theoretical stage or plate above the feed of the aqueous mixture.
7. (canceled)
8. (canceled)

9. (canceled)

10. (previously presented) A process as claimed in claim 4, which further comprises a step in which further mixture, comprising water, is additionally introduced via a feed line at a height of at least one theoretical stage or plate above the feed of the aqueous mixture.

11. (currently amended) A process for purification of ethylene oxide by distillation, comprising the step in which

- an aqueous mixture comprising ethylene oxide, formaldehyde and at least 5% by weight of water is introduced via a feed into a distillation apparatus comprising at least one packed column which contains a structured or bulk packing and has a specific mass transfer area  $A$ , the mixture being introduced at a height above the bottom of at least  $x^{\min}$ , in m, which, for a given specific mass transfer area  $A$ , in  $\text{m}^2/\text{m}^3$ , is given by the equation

$$x^{\min} = 5.5 m - A \cdot 0.006 \text{ m}^2,$$

- pure ethylene oxide containing 4 ppm or less formaldehyde, is taken off at the top and
- in the bottom phase a mixture is obtained which contains less than 5% by weight of ethylene oxide;

an acetaldehyde enriched fraction is removed as a side stream from the column at a side take-off located between the top and bottom of the column,

and wherein the specific mass transfer area  $A$  is in the range from  $100 \text{ m}^2/\text{m}^3$  to ~~[400]~~ 500  $\text{m}^2/\text{m}^3$ .

12. (previously presented) A process as claimed in claim 11, which further comprises a step in which further mixture, comprising water, is additionally introduced via a feed line at a height of at least one theoretical stage or plate above the feed of the aqueous mixture.